

REMARKS

As the previously submitted amendment to the final Office Action was not entered, Applicants resubmit the amendment and add additional comments responding to the Examiner's arguments in the Advisory Action.

Claims 1, 2, 17, and 32-34 as amended, are pending for the Examiner's review and consideration. Claim 1 has been amended to clarify that two different compounds -- a first compound having at least one glycidyl ether functionality and a second compound having an epoxy group -- are present in the polymerizable substance. Support for this amendment is found in the examples in the specification. The first compound having at least one glycidyl ether functionality is polymerizable by hybrid mechanism, and the second compound having an epoxy group is polymerizable by cation mechanism (*See, e.g.*, Specification at page 8, line 21 to page 9, line 9). Claims 27-29 and 47-50 have been cancelled herein without prejudice to Applicants' rights to file one or more continuing or divisional applications directed to this or other unclaimed subject matter. Claims 18, 19, 21, 22, 25, 31, and 38-46 are withdrawn. Claims 31 and 38 have been amended to depend from claim 1. Specifically, "filling composition" in claim 31 has been replaced with "polymerizable substance" to be consistent with claim 1. Support for this amendment is found in Example 8. None of these changes introduce new matter, such that entry of the claims is warranted at this time.

Applicants note with appreciation the withdrawal of the objections to the drawings on page 5 of the Office Action, and the withdrawal of the rejection of claims 6, 7, 30, 33, and 34 under 35 U.S.C. § 112, second paragraph on pages 5 and 6 of the Office Action.

Claims 1, 2, 17, 27-29, and 32-34 were rejected under 35 U.S.C. § 112, second paragraph, as indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In particular, the Office Action on page 6 states that it is unclear what compounds "glycidyl ether" and "epoxide" encompass in the context of the claimed invention. The Office Action asserts that the specification does not provide a definition of what compounds are encompassed by the terms "glycidyl ether" and "epoxide." Moreover, the Office Action alleges that because glycidyl ether compounds contain epoxy groups, the scope of the claims is confused. Applicants respectfully traverse.

The specification at page 9, lines 1 and 2 explains that the "epoxide" is a compound having an epoxy group. A person of ordinary skill in the art knows that the term

"epoxide" simply refers to a compound having at least one epoxy functional group (*i.e.*, a cyclic $\text{CH}_2\text{CH}_2\text{O}$ functionality), and that the term "glycidyl ether" refers to a compound having at least one OCH_2 -(cyclic $\text{CH}_2\text{CH}_2\text{O}$) functionality. There is no need to further describe the meanings of these terms in the specification. The terms "epoxide" and "glycidyl ether" are given their plain and ordinary meaning in the art.

Claim 1 has been amended to clarify that the epoxide and glycidyl ether are two separate compounds. The examples in the specification clearly show an epoxide and a glycidyl ether separate from the epoxide.

The Advisory Action notes that the previous amendment was not entered, and therefore the associated arguments were moot. As Applicants have requested continued examination of the application, the amendment should now be entered and considered.

Accordingly, Applicants respectfully request that this rejection under 35 U.S.C. § 112, second paragraph be reconsidered and withdrawn.

Claims 1, 2, 27-29, and 32-34 were rejected under 35 U.S.C. § 112, first paragraph, for failing to comply with the written description requirement. The Office Action on page 7 alleges that the specification does not have support for the genus of filling compositions now claimed. The Office Action notes that there is no explicit description, disclosure, or discussion of the aforementioned genus of filling compositions.

The test for sufficiency of support in an application is whether the disclosure of the application relied upon "reasonably conveys to the artisan that the inventor had possession at that time of the later claimed subject matter." *Ralston Purina Co. v. Far-Mar-Co., Inc.*, 772 F.2d 1570, 1575, 227 USPQ 177, 179 (Fed. Cir. 1985) (quoting *In re Kaslow*, 707 F.2d 1366, 1375, 217 USPQ 1089, 1096 (Fed. Cir. 1983)). The subject matter of the claim need not be described literally (*i.e.*, using the same terms or *in haec verba*) in order for the disclosure to satisfy the written description requirement. MPEP 2163.02.

The specification clearly provides support for epoxides and glycidyl ethers as photopolymerizable substances that can be used in the filling compositions. Applicants direct the Examiner's attention to the specification at page 8, line 21 to page 9, line 12. This paragraph describes the type of compounds that may be used as the photopolymerizable substance. This portion of the specification explains that the polymerizable composition components can comprise functional groups photopolymerizable by both cation and radical mechanisms. For

cation-mechanism-polymerizable components there can be used a variety of compounds including cyclic esters, formals, acetals, lactones, mono-and polyfunctional epoxides, epoxyoligomers, thiiranes, vinyl monomers including fluorinated and organosilicon compounds, with epoxy compounds being most preferable. For components polymerizable by hybrid mechanism, it is preferable to use glycidyl ethers with unsaturated double bonds.

The Advisory Action comments that this portion of the specification does not disclose a combination of epoxide and glycidyl ether, much less that the polymerizable substance includes glycidyl ether (0.1-85%), epoxide (5-90%), a first alcohol (0-10%), and wherein the solvent includes a second alcohol that is different from the first alcohol. Applicants agree with the Advisory Action on this point.

Support for these features are found in the examples. Glycidyl ether present in an amount of 0.1 wt% is found in Example 8, which states that glycerol proxylate triglycidyl ether is present in 0.1 wt%. Support for a glycidyl ether present in an amount of 85 wt% is found in Example 5, which states that 70 wt% of bisphenol A diglycidyl ether and 15 wt% of 1,4-butanediol diglycidyl ether are used. Similarly, an epoxide in an amount of 5 wt% is found in Example 5 (5 wt% of bis(3,4-epoxycyclohexylmethyl) adipate) and an epoxide in an amount of 90 wt% is found in Example 9 (90 wt% of 3,4-epoxycyclohexylmethyl-3,4-epoxycyclohexanecarboxylate). A first alcohol in an amount of 0 wt% is found in Examples 4, 8, and 11 (no first alcohol present), while 10 wt% of a first alcohol is found in Examples 3, 5, and 7 (neopentylglycol, neopentyl glycol ethoxylate, and poly(caprolactone) triol). Support for the solvent that includes a second alcohol that is different from the first alcohol is found in Examples 3-6 and 8-12 in the specification.

The Advisory Action maintains that the originally disclosed filling compositions each contain very specific components in a very specific ratio and are not correlated at all by the originally filed specification. The Advisory Action further states that the filling compositions only map out a minute portion of the presently claimed genus and that they are not representative of the entire genus now claimed.

The specification clearly describes that the photopolymerizable substance may include compounds such as epoxides and glycidyl ethers. The examples plainly demonstrate the use of both epoxides and glycidyl ethers to prepare the polymerizable substance. Applicants assert that there is a correlation between the specification at page 8, line 21 to page 9, line 12 and

the examples. The cited portion of the specification provides a broad description of the classes of compounds that may be used, and the examples demonstrate the use of specific compounds within these classes.

MPEP 2163, which is referred to in the Office Action, states that, although "adequate written description of a genus which embraces widely variant species cannot be achieved by disclosing only one species within the genus" ... "description of a representative number of species does not require the description to be of such specificity that it would provide individual support for each species that the genus embraces." In this case, the specification clearly describes the genus, and as acknowledged by the Examiner, provides several representative examples of such compositions that are encompassed by the disclosed genus. The specification also points out the mechanism by which each polymerizable substance material works (*e.g.*, epoxides work by cationic polymerization). Therefore, a person of ordinary skill in the art, reading the specification and examples, would be aware that any compound having an epoxy functional group would function in the same way. The description of the genus and the accompanying specific examples clearly show that the applicant was in possession of the claimed genus at the time the application was filed.

The Advisory Action further notes that it appears that the specification indicates that the glycidyl ether compound must have unsaturated double bonds to function. The specification states that "it is *preferable* to use glycidyl ethers with unsaturated double bonds." Indeed, some of the glycidyl ethers used in the examples do not include a double bond. For example, 1,4-cyclohexanedimethanol diglycidyl ether in Example 4, 1,4-butanediol diglycidyl ether in Example 5, and poly(propylene glycol) diglycidyl ether in Example 11. Bisphenol A diglycidyl ether (an example of a glycidyl ether with a double bond) is used in Example 5. This further demonstrates the connection between the cited portion of the specification and the examples.

The Advisory Action states that the genus of compounds containing one or more epoxy groups is infinite, and that each and every one of these compounds certainly do not function in the same way, nor is there any indication that every single compound containing one or more epoxy groups would function in the claimed invention. Claim 1 has been further amended to clarify that the first compound having at least one glycidyl ether functionality is

polymerizable by hybrid mechanism, and the second compound having an epoxy group is polymerizable by cation mechanism.

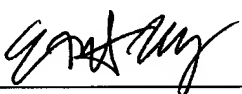
Accordingly, because the specification provides sufficient written description for independent claim 1, Applicants respectfully request that this rejection under 35 U.S.C. § 112, first paragraph, be reconsidered and withdrawn.

Claims 27-29 were rejected under 35 U.S.C. § 112, first paragraph, as failing to comply with the written description requirement, for the reasons set forth on page 9 of the Office Action. Claims 27-29 have been cancelled. Accordingly, Applicants respectfully request that this rejection under 35 U.S.C. § 112, first paragraph, be reconsidered and withdrawn.

Accordingly, the entire application is now in condition for allowance, early notice of which would be appreciated. Should the Examiner not agree with the Applicants' position, then a personal or telephonic interview is respectfully requested to discuss any remaining issues and expedite the eventual allowance of the application.

Respectfully submitted,

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Date



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